

Best Management Practices

MISSOURI DEPARTMENT OF CONSERVATION



Pink mucket

Lampsilis abrupta

Common name • Pink mucket

Scientific name • *Lampsilis abrupta*

Federal status • Endangered

State status • Endangered

Ecology

The pink mucket is generally found in large rivers in moderate to fast-flowing water. These mussels will use a range of substrates but generally prefer gravel-cobble substrates. They have been found in standing to moderately-flowing water as shallow as 1 inch to as deep as 5 feet.

Mussels are filter feeders that pump water through their siphons to collect food particles from the water. They gather necessary nutrients and remove unwanted toxins from the water through this process. Almost all mussel species depend on a fish host to complete their life cycle. Mature adult mussels release glochidia (the immature stage), which must attach to the gills or fins of fish to complete their development. After an average of 2-4 weeks, the newly metamorphosed juveniles drop from the fish; and if they land in suitable habitat, they will burrow into the substrate and grow to repeat the cycle. Fish are an important link in the reproductive cycle of mussels and, typically, only certain species of fish are suitable hosts. The pink mucket uses several species of fish for a host, including the black basses (largemouth, smallmouth and spotted bass) and walleye. The pink mucket spawns from August to September and releases glochidia the following year from May to July.

Reasons for Decline

Although historic records indicate the pink mucket was once widespread across at least 26 rivers in the Midwest and eastern United States, it was considered rare or uncommon throughout the range. Alteration and degradation of habitat as a result of rural and urban development has adversely impacted this species. Such practices as dredging, gravel mining, removal of trees and undergrowth along the streambank, and non-point source pollution from agriculture and urban areas have probably contributed to the decline of this species in Missouri. These practices have reduced availability and quality of habitat, increased stagnation of bottom waters, increased siltation and possibly eliminated or reduced fish host densities.

Specific Recommendations

If guidelines provided by the Missouri Department of Conservation are followed, gravel dredging operations that are restricted to gravel bars above the ordinary low-water mark have little impact on mussel populations.

→ A survey of the waterways in the project area must be conducted by a trained biologist in order to identify occurring populations of this species.

→ Dams and other water impoundment structures should be prohibited in stretches of rivers where there is possible pink mucket habitat to avoid altering water temperature, turbidity and oxygen levels.

→ No work should be allowed below the high bank of the stream between February 15 to September 30.

→ Maintain a vegetated riparian buffer of 100 feet along streams and rivers to prevent erosion and excessive siltation.

→ All equipment that enters the waterway should be washed and checked for juvenile zebra mussels before entering another body of water. This will help prevent the spread of this exotic European mussel species that can negatively affect native aquatic organisms and mussel species like the pink mucket.

General Recommendations

Refer to Management Recommendations for Construction Projects Affecting Missouri Streams and Rivers.

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Disclaimer

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